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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,677	06/29/2001	Makoto Tomioka	010680	9414
38834 7590 09/21/2009 WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036				
EXAMINER CZEKAJ, DAVID J				
ART UNIT		PAPER NUMBER		
2621				
NOTIFICATION DATE		DELIVERY MODE		
09/21/2009		ELECTRONIC		

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1 RECORD OF ORAL HEARING  
2  
3 UNITED STATES PATENT AND TRADEMARK OFFICE  
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5  
6 BEFORE THE BOARD OF PATENT APPEALS  
7 AND INTERFERENCES  
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10 Ex parte MAKOTO TOMIOKA  
11 and HIROSHI TSUYUKI  
12

13  
14 Appeal 2009-003655  
15 Application 09/893,677  
16 Technology Center 2600  
17

18  
19 Oral Hearing Held: August 12, 2009  
20  
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22  
23 Before KENNETH W. HAIRSTON, JOHN C. MARTIN and BRADLEY  
24 W. BAUMEISTER, Administrative Patent Judges.  
25

26 ON BEHALF OF THE APPELLANTS:  
27

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34 The above-entitled matter came on for hearing on Wednesday, August  
35 12, 2009, commencing at 11:25 a.m., at The U.S. Patent and Trademark  
36 Office, 600 Dulany Street, Alexandria, Virginia, before Ashorethea  
37 Cleveland, Notary Public.  
38

1 THE USHER: Good morning. Calendar Number 40, Appeal Number  
2 2009-003655. Mr. Brown.

3 JUDGE HAIRSTON: I was checking my watch. I almost said, good  
4 afternoon; but it's still morning.

5 MR. BROWN: I'll say, good morning.

6 JUDGE HAIRSTON: Still morning. It's been a long day.

7 MR. BROWN: Well, we could jump right into this and talk about  
8 Takahashi, if it's all right with you.

9 JUDGE HAIRSTON: Sure.

10 JUDGE MARTIN: Even though the Examiner seems to pretty much  
11 consistently rely on Figure 1 for the limitation of having part of the relay  
12 system in the camera head, he does also mention Figure 2 in stating the  
13 rejection.

14 It wasn't clear to me from the remarks in the Brief whether they were  
15 taking into account Figure 2 or whether they were just addressing Figure 1,  
16 which is where the Examiner places most of his emphasis.

17 MR. BROWN: Yeah. We addressed Figure 1 since that seemed to be  
18 the Examiner's primary reliance.

19 Figure 2, Takahashi, I guess the relay lens, section six, I think is  
20 probably what you're referring to.

21 JUDGE MARTIN: Right. It does have a piece that looks like it's  
22 surrounded by what's called the operating/holding section three.

23 MR. BROWN: Right. I mean, that is what it appears to show.  
24 There's really no discussion of Figure 2 in the reference. So, just based on  
25 what's shown in this figure, I'd have to say, even if that is the case, if that is  
26 part of the relay optical system, the claim calls for an image to be formed

1 within the camera head between the relay optical system and the image  
2 optical system in the camera head. That image shown in Figure 2, A, is not  
3 shown, not included within the camera head and, B, is within the relay  
4 optical system and is not shown between a relay optical system and an  
5 imaging optical system in the camera head.

6 JUDGE MARTIN: Let me pursue that a moment. Okay. We don't  
7 have an image arrow shown inside this operating holding section in figure  
8 two. So, I guess maybe we're supposed to assume that the only image inside  
9 that section is the one that's on the CCD. I don't know.

10 Is there implicitly an image somewhere in there other than the one on  
11 the CCD? You've got the light coming out of the relay lens. Does the relay  
12 lens always provide an output image the same as passed on by the  
13 image-forming lens? We do have image-forming lenses; right?

14 MR. BROWN: Right. Doesn't the reference in Figure 2 divide the  
15 image?

16 JUDGE MARTIN: It divides it. Right. The way the light paths are  
17 shown there, it looks like you've got parallel light coming out -- that last  
18 relay lens element.

19 MR. BROWN: Right. So, I would say no. They'd have to all  
20 come together to form the image. That's shown in three segments in Figure  
21 2, right after the beginning of the object, optical system, in the middle of the  
22 relay optical system and towards the end. The three is showing light beams  
23 that are actually -- they coincide to form the image.

24 So, I would say no, there's no image formed in the actual  
25 operating/holding section, three, in Figure 2.

1 JUDGE MARTIN: So, the difference between Figure 1 and Figure 2  
2 is that -- well, the only difference between those two figures, since they are  
3 both described as being the first embodiment, I guess is the fact that Figure 2  
4 doesn't include those reflecting mirrors, 10A and 10B that we see in Figure  
5 1, right?

6 I'm just wondering aloud to what extent your arguments that are  
7 directed to Figure 1 are necessarily carried over to Figure 2.

8 The position of the last lens is clearly different between Figures 1 and  
9 2.

10 MR. BROWN: Right; and I think the reason why the Examiner  
11 doesn't rely on Figure 2 or didn't pursue Figure 2 is that there is no image  
12 formed in the camera head. So, if he's able to rely on Figure 1 and he's able  
13 to establish that the last relay lens is in the camera head then you can say  
14 that the image although it's formed in the lens that would constitute between.  
15 That was my thinking in Figure 1 and Figure 2.

16 JUDGE BAUMEISTER: On the Examiner's Answer on page four,  
17 I'm reading this to say, we've got primary references to Igarashi that teaches  
18 a detachable tube but doesn't disclose the last relay lens being within the  
19 head and Takahashi, in Figures 1 and 2, shows these are methods of forming  
20 relay systems, the last one in the head or in the tube and being able to do it  
21 either way. Do you have a response to that? That's my interpretation of the  
22 Examiner's position.

23 MR. BROWN: Well, I guess I would just reiterate, A, that even if  
24 you modify the references, there's still no image being formed after the relay  
25 optical system in the camera head before an optical -- I mean, an optical  
26 imaging system.

1           And then, the reason we do this is because this provides us -- it  
2       provides us to be able to focus in on the image. So, that's what we're doing  
3       in the camera head.

4           So, I think if you were to take that position, you would have to have  
5       some sort of rationale as to why, what benefit of actually modifying the  
6       references -- to just indicate that -- to put them in different relay optical  
7       systems, different methods, I'm not really sure what the Examiner is getting  
8       at there.

9           I mean, yeah, sure, you can relay the image in different ways and have  
10      the relay go on and on and on. I'm sure that's correct; but again, there's no  
11      real reason as to why you would have a relay image formed in the camera  
12      head after the relay system and before the imaging optical system.

13          JUDGE MARTIN: There's another difference between Figures 1 and  
14      2 that puzzles me and that is where those little arrows are that appear to  
15      represent the actual image claim. Like in Figure 1, it's the relay lenses. The  
16      one sort of to the left and one to the right had the arrows inside the lenses.  
17      In Figure 2, the arrows are between the lenses. You wonder where the  
18      planes of the images are. I don't know. That's just a puzzle since there's no  
19      discussion in Figure 2.

20          MR. BROWN: To me it seems to make sense that that's just where  
21      the images are formed in the relay optical system. It can be either in the  
22      lenses or between them.

23          JUDGE MARTIN: Oh, okay. All right. Maybe the point of Figure 1  
24      is that that's a collection of lenses that's represented, a collection of lenses  
25      and then somewhere there's a --

26          MR. BROWN: Oh, yeah.

1 JUDGE MARTIN: I don't know. All right.

2 MR. BROWN: And I think that's what the Examiner was saying, kind  
3 of, when he says, the relay optical system can be put together in many  
4 different methods and he's just looking at Figure 1 and it shows the break in  
5 section two.

6 JUDGE MARTIN: I have no further questions.

7 JUDGE HAIRSTON: Do you have any further comments?

8 MR. BROWN: I just want to reiterate that we don't believe that either  
9 of the references, Igarashi or Takahashi, teaches -- fails to [sic] disclose the  
10 features of claim 1 as noted in the brief.

11 JUDGE MARTIN: Oh, I do have another question about the claim  
12 language. The claim language, when it talks about what's in the camera  
13 head, says, "Wherein the camera head includes a part of the relay optical  
14 system."

15 In the reference Takahashi, if we look at Figure 2 again, the thing that  
16 holds the camera -- and it looks like you could call it a head. It does include  
17 in the sense that it contains; right? And it surrounds. That last relay lens is  
18 not rotatable with the CCD's and their associated imaging lenses but it does  
19 include. The camera head, if we can call it that, does include that last lens,  
20 doesn't it? Or do you think "includes" is more restrictive than that?

21 MR. BROWN: I would have to say that it appears that it would  
22 include it although there does seem to be some type of sectional section in  
23 the holding section three that includes other elements; but just from the  
24 figure, I think it would be difficult to say that that's not actually included in  
25 the head physically.

26 JUDGE MARTIN: All right. Thank you. That's all I have.

1 JUDGE HAIRSTON: Thank you, counsel.  
2 (Whereupon, at approximately 11:36 a.m., the proceedings were  
3 concluded.)